



## Prescriptions for Excellence in Health Care Newsletter Supplement

A collaboration between Jefferson School of Population  
Health and Eli Lilly and Company

---

Volume 1

Issue 10 *Prescriptions for Excellence in Health Care*  
Winter 2010

Article 1

---

February 2011

# Prescriptions for Excellence in Healthcare Winter 2010 download full pdf

Follow this and additional works at: <http://jdc.jefferson.edu/pehc>

 Part of the [Public Health Commons](#)

[Let us know how access to this document benefits you](#)

---

### Recommended Citation

(2011) "Prescriptions for Excellence in Healthcare Winter 2010 download full pdf," *Prescriptions for Excellence in Health Care Newsletter Supplement*: Vol. 1 : Iss. 10 , Article 1.

Available at: <http://jdc.jefferson.edu/pehc/vol1/iss10/1>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Prescriptions for Excellence in Health Care Newsletter Supplement by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: [JeffersonDigitalCommons@jefferson.edu](mailto:JeffersonDigitalCommons@jefferson.edu).

# Prescriptions for Excellence in HEALTH CARE

A COLLABORATION BETWEEN JEFFERSON SCHOOL OF POPULATION HEALTH AND LILLY USA, LLC

Editor-in-Chief: David B. Nash, MD, MBA

• Managing Editor: Janice L. Clarke, RN, BBA • Editorial Staff: Dorah C. Meiris, Alexis Skoufalos, EdD

## TABLE OF CONTENTS

### A Message from Lilly ..... 2

By Jarvan Collins

### Transition of Care Program Evaluation: Accountability and Attribution ..... 3

By Thomas Wilson, PhD

### Reporting Patient Safety Events: Learning Opportunities for Resident Physicians ..... 4

By David Mayer, MD

### Improved Transitions Through Accountable Care Organizations ..... 6

By Richard G. Stefanacci, D, MGH, MBA,  
AGSF, CMD

This newsletter was jointly developed and subject to editorial review by Jefferson School of Population Health and Lilly USA, LLC, and is supported through funding by Lilly USA, LLC. The content and viewpoints expressed are those of the individual authors, and are not necessarily those of Lilly USA, LLC or the Jefferson School of Population Health.

## Editorial

### "Lost in Transition"

By David B. Nash, MD, MBA

Editor-in-Chief

Is there a specific point along the health care delivery continuum at which the risk for compromising patient safety and quality care is dangerously high? We asked ourselves this question last spring while brainstorming possible themes for the 5<sup>th</sup> set of issues for *Prescriptions for Excellence in Health Care* – and, time after time, our conversation gravitated toward transitions of care (TOC).

Transitions of care refers to those very common, relatively brief, but critically important intervals that begin when preparations are made for a patient to leave one provider and/or setting and end when the patient is received by another provider and/or setting. It is difficult to imagine another point in the health care delivery process that is so ubiquitous and yet so vulnerable to pitfalls.

As an internist, imagining what is "lost in transition" in a single day is a scary thought! Whenever patients are "handed off" – from primary physician to specialist physician and back; from inpatient unit to imaging department and back; from hospital to skilled nursing facility to home – there is the potential for non-communication or miscommunication of vitally important information.

The consequences of these communication failures are at the root of

some of the most challenging issues in health care today. The classic example is chronic illness, where inadequate TOC processes can lead to medication over- or under-dosing, polypharmacy, duplicative services, and/or failure to provide necessary services. Hospital readmissions are another example of how communication failures during TOC can result in negative health and financial outcomes.

With the enthusiastic support of our partners at Lilly USA, we identified a number of programs and initiatives aimed at improving TOC across the health care spectrum and invited their leaders to participate in an invitation-only forum. The articles in this issue and the 3 that follow are based on the material that was presented and discussed at this special expert forum.

The 3 articles in this issue touch on as many different aspects of TOC. The first,

*Prescriptions for Excellence in Health Care* is brought to *Health Policy Newsletter* readers by Jefferson School of Population Health in partnership with Lilly USA, LLC to provide essential information from the quality improvement and patient safety arenas.

(continued on page 2)

“Transition of Care Program Evaluation: Accountability and Attribution,” offers insight into the essential elements of TOC improvement, and provides a 5-step process for designing an initiative. The second article, “Reporting Patient Safety Events: Learning Opportunities for Resident Physicians,” approaches the issue from the clinical training perspective. The final article, “Improved Transitions Through Accountable Care Organizations,” provides an excellent

overview of this promising new model, using the successful Program of All-inclusive Care for the Elderly (PACE) as an example.

On a personal note, I must admit that I was skeptical about finding a strong, core group of projects that targeted TOC. I couldn't have been more impressed with the breadth and quality of the work being done or with the dedication and expertise of the authors.

As always, I welcome reader comments and questions. I can be reached at [david.nash@jefferson.edu](mailto:david.nash@jefferson.edu).

*David B. Nash, MD, MBA, is the Founding Dean and the Dr. Raymond C. and Dr. N. Grandon Professor of Health Policy at the Jefferson School of Population Health (JSPH) of Thomas Jefferson University in Philadelphia, Pennsylvania.*

## A Message from Lilly Opportunity for Medication Compliance

By Javan Collins

Transitions between different segments of our health care system present both a challenge and an opportunity for all stakeholders. At Lilly, we recognize that hospitals and payers are striving to improve quality of life and clinical outcomes for patients.

One key integrated initiative to consider is “door to balloon time.” Evidence demonstrates that when cardiac catheterization is performed within 90 minutes, the patient has better outcomes. After spending tremendous resources on quality improvement initiatives to better understand this process, hospitals discovered efficiencies and streamlined teamwork so that patients can reach the catheterization lab in less than 90 minutes. This significant improvement was driven by an unrelenting focus, which resulted in very positive outcomes for hospitals and, ultimately, for their patients.

However, the pursuit of quality improvement does not end here – the catheterization lab is just the beginning. Discharging the patient from the hospital following cardiac catheterization can be very complicated because the patient must take ownership of his or her care. A

successful hospital discharge process supports the patient with appropriate education, tools, medications, and follow-up plan to minimize the risk of complications or recurrent events.

The hospital discharge team considers patient-specific factors such as: the next point of care and how the patient will get there; need for follow-up appointments and/or post-procedure care; and need for lifestyle modifications and education to support desired behavior changes. A number of important medication-related questions are also addressed including: medications needed upon discharge and medications the patient has at home; new prescriptions to be filled; and financial considerations such as insurance coverage for medications and the ability of the patient to afford medication for the duration of treatment. Given all that the discharge team must consider and convey to the patient, education concerning medications may be overlooked.

Guidelines and multiple trials emphasize the importance of patient compliance with their medications. Patients need to be made aware that medications are a critical component in the transition to self-care in that

they help to minimize the risk of recurrent events or readmission to the hospital. Depending on comorbidities, patients with acute coronary syndrome managed with percutaneous coronary intervention usually leave the hospital with several prescriptions.

Some studies and market research reports indicate that up to 50% of patients might not fill their first prescription – and up to 50% of those who fill the first prescription may fail to obtain a refill to complete therapy. The implication for recently discharged patients is that appropriate blood levels of prescribed medications are not maintained, putting them at risk for potential complications including readmission.

How do we improve this step in the discharge transition process – a step that may have a major impact on the desired outcomes for patients, payers, and hospitals? The answer may be as straightforward as employing the same unrelenting focus that was applied to “door to balloon time” to “adherence/compliance with medications.”

*Javan Collins is Vice President of US Cardiovascular Business, Eli Lilly & Co.*

## Transition of Care Program Evaluation: Accountability and Attribution

By Thomas Wilson, PhD, DrPH

As the National Transition of Care Coalition (NTOCC; [www.ntocc.org](http://www.ntocc.org)) has correctly identified, a key factor in improving transition of care (TOC) transactions is the identification of the “accountable provider” at various points in the transition. The measurement workgroup of NTOCC (of which I am a member) has written that, to properly evaluate a TOC program, an “accountable provider” must be identified at both the sending and receiving end of the transaction, and there must be a record that the transition actually took place.

The idea of recording a successful transition between accountable providers is at the very foundation of being able to measure the effectiveness of initiatives designed to improve TOCs between providers and between settings.

It must be pointed out that overall effectiveness goes beyond a successful handoff. Ultimately we want to document that more effective and efficient care has taken place because of this improvement, and, most importantly, that the health of the patient is better than it otherwise would have been without the improvement.

In the classic quality improvement (QI) framework, a successful handoff is a much needed “process” improvement that could be augmented by improvements in “structure.” However, without improvements in “outcomes,” the new transition of care initiative would not be considered a complete success.

To illustrate this point, the QI framework can be applied to a relay race being run on a track – a prototypical transition. The structure is the well-designed/engineered running track. The process is the baton securely in the hand of the sending runner, then briefly in the hands of both the sending and receiving runner during the handoff, and finally, securely

in the hand of the receiving runner. The desired outcome is the “anchor” relay team member sprinting to first place in the race.

We need to win our race, too. But in health care we often run the race alone, and when we run the race alone it is very difficult to take into account factors outside our control – confounding factors – that may influence the desired outcomes. Of course, on the track we run against competitors, and many factors are likely to influence the outcome (eg, rain, wind, heat). However, such factors impact all runners and, thus, are unlikely to impact the outcome. Other factors (eg, performance enhancing drugs) that are not ubiquitous are obvious exceptions and must be considered.

When we conduct TOC programs in isolation, we can easily track changes in process (ie, better handoffs) as there are not likely strong influences on these processes. The very common and necessary practice of tracking changes in desired outcomes over time (eg, quality of life, quality of health) is essential, but blindly attributing these changes to the process improvement can be problematic. We must consider the influence of confounding factors and, when possible, build consideration of these into our intervention and evaluation strategy. Only then can we fairly attribute measured improvements over time to our special quality processes.

Thus, the framework for enhanced measurement of quality of TOC improvements should be expanded to include consideration of confounding factors to enable us to make attribution (ie, a causal link: structure, process, outcomes, and attribution).

This is a 5-step process.

1. Identify the “accountable providers” in the TOC process.

2. Remain aware that simply tracking outcomes over time and attributing changes to a single process improvement may be problematic. We must consider other factors that may be responsible for the outcomes. Often, multiple initiatives take place in the same setting. How many current initiatives target reduction in hospital readmissions in the same setting? How many of these initiatives claim credit for the same outcome, at least when the outcome shows improvement? If 10 initiatives claim credit for a single outcome, might we be wasting precious resources? Thus, awareness of the “attribution problem” is necessary, but not sufficient.
3. Build into any TOC strategy a clear understanding of the causal pathway from process improvement to outcomes improvement. Going directly from a better handoff to a reduction in readmissions may be too great a hypothetical leap. Instead, we must build an intervention pathway with interim markers along the way. For example: “A” leads to “B” leads to “C” (ie, reduction in readmissions), where “B” – 1 or 2 interim metrics – is something likely to be directly influenced by the TOC intervention.
4. Build into any TOC intervention an evaluation strategy to use the pathway and pathway metrics devised, taking into account as much as possible the confounding factors. A conceptual framework for this process, developed by the nonprofit Population Health Impact Institute ([www.phiinstitute.org](http://www.phiinstitute.org)), has proven to be a good guideline. The framework contains 3 types of pathway metrics, listed in order of causality (Types I, II, and III), and 1 type of confounding factor metric (Type IV). The conceptual diagram

*(continued on page 4)*



clearly shows that Type IV metrics can influence the pathway.

5. Include in the evaluation strategy some ability to isolate the TOC intervention (as measured by a Type I metric) from other interventions. This requires the use of a comparator or a referent. A defined time period prior to the intervention is a decent referent if no other factors will significantly influence the outcomes in this time series. The decent referent is akin to the other runners in the relay race scenario. Ideally, it is influenced by the same important confounding factors as the TOC intervention, except the individuals in the referent did not experience the TOC intervention.

The referent can be identified by design at the beginning of your initiative (eg, conduct the TOC intervention on 1 inpatient floor, in 1 region, or in 1 department and use another floor, region, or department as a referent or comparator); or by happenstance (eg, you discover that 1 floor, region, or department did not participate in the TOC intervention). Although many referents can be devised (eg, benchmark, peer-reviewed article, randomized controlled trial), the key validity consideration is to use the referent to assess the degree to which it is (or was, in the case of a peer-reviewed article or published benchmark) influenced

by the same confounding factors as the TOC intervention.

The referent can be used to determine if the identified confounding factor metrics were present. If so, the comparison of outcome metric values between the TOC population and the referent can be used to assess the “attribution” of the process improvement to the outcomes improvement, while taking into account confounding factors.

A typical dictionary definition of “accountable” is the “individual or departmental responsibility to perform a certain function.” To conduct proper evaluations we need individuals to be responsible for recording the sending and receiving transaction. But just because a send-receive was conducted does not mean a positive impact on quality of life or health occurred. Such a determination requires “attribution,” defined by the dictionary as “the act of establishing a particular person as the creator of something (eg, a work of art)” in order to make a legitimate cause-effect statement ([www.thefreedictionary.com](http://www.thefreedictionary.com)). Thus accountability and attribution are not the same thing. The former is related to an organizational structure needed, in this case, to ensure that the metrics are recorded. The latter is related to a method of causal inference. Both must be considered to make these kinds of statements: “*The author did create this work.*” “*The TOC intervention did influence the outcome.*”

In summary, these 5 steps must be followed to determine if the “accountable” provider model – and any associated TOC intervention – can be attributed to targeted outcomes:

1. Identify the accountable providers at both the sending and receiving end of a TOC intervention.
2. Be aware of possible external influences – confounding factors – on targeted outcomes.
3. Define the pathway from TOC intervention (as reported by the accountable providers) to the outcome(s).
4. Identify confounding factors and include these in the evaluation model as metrics.
5. Identify a referent to assess the equivalence of confounding factors and to compare outcome metrics.

Using these 5 steps as a framework can help improve TOC interventions by “giving credit where credit is due.”

**Thomas Wilson, PhD, DrPH**, is Board Chair of the nonprofit Population Health Impact Institute and is an epidemiologist at Trajectory Healthcare, LLC. He can be reached at: [twilson@trajectory-inc.com](mailto:twilson@trajectory-inc.com)

## Reporting Patient Safety Events: Learning Opportunities for Resident Physicians

By David Mayer, MD

The goal of any medical education curriculum is to prepare trainees to address problems that affect the health of the public.<sup>1</sup> Over the past decade, medical errors and patient safety have emerged as global concerns in delivering quality health care. There has been considerable discussion in both the public and private sectors regarding ways to modify the current

medical system to address the concerns raised by the Institute of Medicine’s (IOM) 1999 report, *To Err Is Human: Building a Safer Health System*.<sup>2</sup>

In its follow-up report, *Crossing the Quality Chasm: A New Health System for the 21<sup>st</sup> Century*,<sup>3</sup> the IOM called for change in the education and training of physicians in order to address

these problems. The Association of American Medical Colleges has called for a “collaborative effort to ensure that the next generation of physicians is adequately prepared to recognize the sources of error in medical practice, to acknowledge their own vulnerability to error, and to engage fully in the process of continuous quality improvement (CQI).”

Clearly, future physicians will need to be as competent in areas such as behavioral science, social science, resource management, teamwork, error science, leadership, quality improvement, root cause analysis, risk management, and interpersonal communication as they are in diagnostic medicine. Without these newer skills and competencies, health care practitioners will continue to fall prey to the numerous safety and quality “pitfalls” in the clinical environment.

Serious discussions regarding the design, implementation, assessment, and faculty development needs of patient safety education at both the undergraduate and graduate medical education levels have been sparse. In its white paper on the status of patient safety education at the trainee level, the Lucian Leape Roundtable on Patient Safety Education concluded “For the past 100 years, the singular focus of medical education has been on teaching the basic sciences and clinical knowledge and related skills. This can no longer be accepted as an adequate medical student education and training process in today’s health care environment, for it simply will not permit the significant improvements in patient safety that are so desperately needed.”<sup>4</sup>

At the graduate education level, David Leach, past chief executive officer of the Accreditation Council for Graduate Medical Education (ACGME), noted that all 6 of the ACGME competencies relate to patient safety in some way.<sup>5</sup> “Residents should be able to demonstrate that they can gather accurate information about the patient, that they know the cognate science of safety, that they can do a root cause analysis in the analysis of errors. They should demonstrate patterns of communication that promote safety, as well as professionalism needed to tell the truth about how safe the system is. However, it is probable that systems-based practice is the competence in which safety is most prominently featured. It is here that skills can be acquired to design safer systems.”

The reporting of patient safety events – including near misses and unsafe conditions – is essential for patient safety and a critical characteristic of high reliability organizations. More than 10 years ago, the IOM reported deaths of up to 100,000 patients per year due to preventable adverse events. The authors of the report asked health care organizations to create voluntary reporting systems to improve the understanding of factors that contribute to medical errors and unsafe conditions<sup>2</sup> and The Joint Commission responded by requiring that accredited organizations establish reporting systems for adverse events.<sup>6</sup>

Despite these mandates and the perceived benefits of reporting, a survey in teaching hospitals revealed that only 54.8% of physicians knew how to report medical errors and only 39.5% knew what errors to report.<sup>7</sup> In our institution, fewer than 1% (<30 total reports) of safety event reports come from the more than 500 resident physicians who rotate through our medical center.

In a questionnaire survey, White et al found that only 31% of interns or residents reported receiving instruction in error disclosure techniques.<sup>8</sup> Kaldjian et al identified factors that may facilitate (eg, responsibility to the patient and profession) or impede (eg, attitude, fears, anxieties) reporting of adverse events.<sup>9</sup> To investigate whether attitudes toward reporting and reporting skills could be improved through education, a patient safety and medical fallibility curriculum was developed by Madigosky et al.<sup>10</sup> The researchers found that this curriculum improved some attitudes and skills toward error reporting in the short term, but improvements were not sustained after 1 year.

The response to any patient safety event begins with a report to the organization’s safety and risk management department. Reporting can occur in a variety of ways – phone call, written report, online messaging, or in person discussion – and can be provided anonymously. Because

they are at the front line of patient care and routinely see adverse events, unsafe conditions, and near misses within the health system, it is essential that resident physicians have appropriate training, mentoring, and support in reporting of these events. Parker Palmer concluded that residents can serve as “moral agents” in protecting patients from the hazards inherent in health care today.<sup>11</sup>

Resident reporting may identify adverse events, unsafe conditions, or near misses that other reporting mechanisms may miss.<sup>12</sup> Patient safety events reported by residents can trigger quality improvement initiatives at the bedside while serving as excellent educational opportunities for the resident.<sup>13</sup>

As with many quality improvement initiatives, multiple barriers exist to reporting unexpected adverse events. Commonly encountered barriers include the fear of retribution or “shaming” and the assumption that nothing will come from reporting the event. Program directors must eradicate the “shame and blame” mentality that plagues many departments and institutions. In addition, appropriate follow-up with resident physicians and other care providers, including outcomes of investigations, patient interactions, and process improvements, should be a mandatory component of future resident reporting.

### Educational Intervention

At the University of Illinois Medical Center, an educational intervention increased the number of adverse event reports by anesthesiology residents, improved their attitudes about the importance of reporting, and produced a source for learning opportunities and process improvements in the delivery of anesthesia care.<sup>14</sup>

In a prospective assessor study, anesthesiology residents participated in a training program focused on the importance of adverse event reporting in patient safety and reporting methods.

*(continued on page 6)*

Quarterly adverse event reports were analyzed retrospectively for the 2 years prior to the intervention and then prospectively on a quarterly basis. The residents also completed a survey prior to and 1 year after the intervention to evaluate their attitudes, experience, and knowledge regarding adverse event reporting.

The number of adverse event reports increased from 0 per quarter in the 2 years pre intervention to over 20 per quarter for the 6 quarters post intervention. Several categories of harm events, near misses, and unsafe conditions were identified. Over half of the harm events associated with procedural complications were associated with lack of supervision. Significant progress was also observed in the residents' ability to appropriately file a report, improved attitudes regarding the value of reporting and available emotional support, and a reduction in the perceived impediments to reporting.

In conclusion, residency programs that ascribe to a culture where reporting of patient safety events by residents is encouraged are ideally situated to provide training and assessment to their residents

in the 6 areas of the ACGME core competencies while identifying additional areas for patient care improvement.

The author acknowledges and thanks Tim McDonald, MD, JD and Barb Jericho, MD for their contributions.

*David Mayer, MD, is Associate Professor of Anesthesia and Vice Chair for Safety and Quality in the Department of Anesthesiology, Co-Executive Director of the Institute for Patient Safety Excellence, and Director of Graduate Patient Safety Education at the University of Illinois Medical Center. He can be reached at: [Mayer1@uic.edu](mailto:Mayer1@uic.edu)*

### References

1. Kern DE, Thomas PA, Howard DM, Bass EB. *Curriculum Development for Medical Education: A Six-Step Approach*. Baltimore, MD: The Johns Hopkins University Press; 1998.
2. Kohn LT, Corrigan JM, Donaldson MS, eds. *To Err Is Human: Building a Safer Health System*. Washington, DC: National Academy Press; 2000.
3. Committee on Quality of Health Care in America, Institute of Medicine. *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press; 2001.
4. Lucian Leape Institute at the National Patient Safety Foundation. *Unmet Needs: Teaching Physicians to Provide Safe Patient Care*. Boston, MA: National Patient Safety Foundation; 2009.
5. Leach DC. Competence and safety: the yin and yang of good patient care. *ACGME Bulletin*. 2004;August:2-3.
6. Joint Commission on the Accreditation of Healthcare Organizations. 2009 Patient Safety. [www.jointcommission.org/patientsafety](http://www.jointcommission.org/patientsafety). Accessed February 10, 2010.
7. Kaldjian LC, Jones EW, Wu BJ, Forman-Hoffman VL, Levi BH, Rosenthal GE. Reporting medical errors to improve patient safety: a survey of physicians in teaching hospitals. *Arch Intern Med*. 2008;168(1):40-60.
8. White AA, Gallagher TH, Krauss MJ, et al. The attitudes and experiences of trainees regarding disclosing medical errors to patients. *Acad Med*. 2008;83(3):250-255.
9. Kaldjian LC, Jones EW, Rosenthal GE, Tripp-Reimer T, Hillis SL. An empirically derived taxonomy of factors affecting physicians' willingness to disclose medical errors. *J Gen Intern Med*. 2006;21:942-948.
10. Madigosky WS, Headrick LA, Nelson K, Cox KR, Anderson T. Changing and sustaining medical students' knowledge, skills, and attitudes about patient safety and medical fallibility. *Acad Med*. 2006; 81:94-101.
11. Palmer PI. Education for the new professionalism. Marvin Dunn Memorial Lecture. ACGME Educational Workshop; March 4, 2006; Orlando, FL.
12. O'Neil AC, Petersen LA, Cook EF, Bates DW, Lee TH, Brennan TA. Physician reporting compared with medical-record review to identify adverse medical events. *Ann Intern Med*. 1993;119:370-376.
13. Jaggi R, Kitch BT, Weinstein DF, Campbell EG, Hutter M, Wissman JS. Residents report on adverse events and their causes. *Arch Intern Med*. 2005;165:2607-2613.
14. Jericho BG, Tassone RF, Centomani NM, et al. An assessment of an educational intervention on resident physician attitudes, knowledge and skills related to adverse event reporting. *J Grad Med Educ*. 2010;2(2):188-194.

## Improved Transitions through Accountable Care Organizations

By Richard G. Stefanacci, DO, MGH, MBA, AGSF, CMD

Accomplishing successful transitions of care is a complex feat that requires coordination among many different players. Of the models that exist today, the Accountable Care Organization (ACO) is among the most useful in effecting successful transitions of care. For this reason, the recently enacted health care reform legislation places emphasis on implementing the ACO model.

### Accountable Care Organizations

An ACO is a local health care organization and a related set of

providers – at minimum, primary care physicians (PCPs), specialists, and hospitals – that are held accountable for the cost and quality of the care delivered to a defined population.

The goal of the ACO is to deliver coordinated, efficient care. In addition to a bundled payment for providing care to a population, ACOs generally receive a financial bonus for achieving specific quality and cost targets. In some cases, ACOs that fail to achieve targets are subject to a financial penalty.

In order to meet the requirements for this type of incentive system, an ACO must be able to: care for patients across the continuum of care in different institutional settings; engage in prospective budgeting and planning for resource requirements; and support comprehensive, valid, and reliable measurement of its performance.

These goals, along with their structural and financial qualities, motivate ACOs to develop systems that promote efficient, effective transitions between stages of health and care settings.



## ACOs and Health Care Reform

The Patient Protection and Affordable Care Act (PPACA) of 2010 encourages the creation of ACOs. By means of a shared savings program (to be established January 1, 2012), the Act allows providers organized as ACOs to share in the cost savings they achieve for Medicare. To qualify as an ACO, organizations must agree to be accountable for the overall care of their Medicare beneficiaries; have adequate participation of PCPs; and to define and implement processes to promote evidence-based medicine, report on quality and costs, and coordinate care.

The Centers for Medicare and Medicaid Services has outlined the preliminary requirements for Medicare ACOs,<sup>1</sup> which include: a formal legal structure to receive and distribute shared savings; a sufficient number of PCPs for the assigned beneficiaries; a minimum of 5000 assigned beneficiaries; an agreement to participate for no less than 3 years; documented information regarding participating health professionals to support beneficiary assignment; a leadership and management structure that includes clinical and administrative systems; defined processes that promote evidence-based medicine, report data for quality and cost measures, and coordinate care; and a demonstrated model of patient-centeredness.

## Evolution of the PACE Program: A Model ACO

The Program of All-inclusive Care for the Elderly (PACE) is already established as an ACO that utilizes the pillar of transitions of care (ie, includes an electronic medical record [EMR], medication management, caregiver support, and physician follow-up). The PACE model of care can be traced back to the early 1970s, when a public health dentist along with community leaders created a community-based system of care to meet the needs of immigrant populations in San Francisco. In 1990, Medicare and Medicaid issued waivers to several sites as demonstration

programs, and the Balanced Budget Act of 1997 established PACE both as a permanent part of the Medicare program and an option under state Medicaid programs. Existing PACE demonstration programs became permanent PACE providers by 2003.

Although these programs typically care for fewer than 5000 assigned beneficiaries, PACE is an ACO with a proven track record. PACE has demonstrated very positive outcomes for an especially frail population of older adults in 3 specific areas<sup>2</sup>:

- *Health Care Utilization.* PACE enrollment led to sustained lower levels of hospitalizations and long-term nursing home (NH) admissions and sustained increases in ambulatory visits.
- *Health and Functioning.* PACE enrollees had higher levels of self-reported health and physical functioning in the short term; generally these decreased over the follow-up period. Enrollees lived in the community more days per year and experienced decreased mortality.
- *Satisfaction and Quality of Life.* Over the duration of the evaluation, PACE enrollees were more likely to report regular attendance at social functions (at least once per week), satisfaction with care, and a better quality of life. These satisfaction and quality-of-life effects gradually declined as the length of enrollment in the program increased.

The PACE model<sup>3</sup> is centered on the belief that it is better for the well-being of seniors with chronic care needs and their families to be served in the community whenever possible. PACE serves individuals aged 55 or older who are: certified by their states as needing NH care, able to live safely in the community at the time of enrollment, and live in a PACE service area. One important distinction is that older adults cared for by PACE are considered to be active

“participants” in the PACE program rather than “members” or “patients.” Although eligibility for NH level of care must be certified for enrollment, only 7% of PACE participants actually reside in a NH. If a PACE enrollee does need NH care, the PACE program pays for it and continues to coordinate the enrollee’s care.

Seniors’ health care costs are typically paid by Medicare and Medicaid programs or out-of-pocket, making access to comprehensive (ie, preventive, primary, acute, and long-term) care difficult or impossible. Because they are designed to deliver a comprehensive set of services focused on health and well-being, and because of their ability to combine dollars from different funding streams, PACE programs can offer seniors who would otherwise be relegated to NHs the option of continuing to live in the community.

Perceptions of PACE may vary widely from one stakeholder to another. Public awareness is often limited to PACE vans that provide transportation for participants. Policy makers may understand PACE as a program that integrates Medicare and long-term care funding in a way that saves taxpayer dollars while providing more effective care. PACE participants and their family members might focus on the PACE Center as the central part of the program. In reality, it is the combination of clinical and support service components that results in care and services tailored to the individual needs of each PACE participant.

## Interdisciplinary Team Approach

PACE care planning is the process by which each participant’s Interdisciplinary Team (IDT) holistically assesses his or her medical, functional, psychosocial, and cognitive needs, and develops a single, comprehensive plan of care to address those identified needs. The IDT members who conduct the extensive discipline-specific assessments collectively discuss the participant’s identified needs

*(continued on page 8)*



and design and monitor the individualized care plan. The care plan delineates problems, interventions, and measurable outcomes to improve, maintain, recover, or reset a participant's baseline health status and preferences for health care.

When a care plan is properly executed, the assessments and care planning flow together in a seamless, ongoing process that:

- Takes into account each participant as a human being with unique characteristics, needs, and documented preferences;
- Anticipates potential problems by identifying individual risks and determining how these risks can be minimized to foster the participant's highest feasible level of well-being;
- Develops and implements a plan of care that integrates discipline-specific assessments and allows for coordinated and continuous evaluation of the efficacy of care; and
- Comprehensively reevaluates the participant's status at prescribed intervals as well as at episodic reassessments prompted by changes in the participant's health status. Note: Significant changes in health status compel a timely reassessment that cannot be deferred to a prescribed interval such as semiannual or annual reassessments.

### Role of Technology

Within PACE's approach, the key elements that support transitions of care include an EMR, medication management, caregiver support, and physician follow-up. In addition to utilizing a complete EMR that increases the level of communication and permits analysis of clinical practices, PACE programs commonly employ technologies such as home monitoring and sensors. These provide additional oversight and warn of potential issues before significant problems develop.

Given the high number of medications prescribed for this population, assuring that participants take the right medication correctly is critical. To address medication reconciliation, many PACE programs arrange for their home care nurses to visit with participants immediately upon discharge from a facility to assure that they understand and have access to discharge medications. As part of the process, home care nurses also remove medications that are no longer prescribed.

Technology also is used for medication management. At-home dispensing devices, placed at the bedside, prompt participants to take their medications at the appropriate time and notify the care team of any issues electronically in real time. The devices are especially helpful in managing "as needed" medications, which may otherwise be overused as a result of participant cognitive issues.

### Caregiver Support

Because caregivers are critical to enabling older adults to remain in their homes, caregiver support is a major focus of PACE. The program features hands-on caregiver education, timely caregiver support, and extensive nonmedical caregiver assistance, which includes home aides, respite care, and home improvements.

### Physician Follow-Up

An unmet opportunity identified with regard to transitions of care is assuring timely physician follow-up. PACE programs provide transportation, which often presents a barrier to making a physician appointment. Most PACE programs go further by actually setting the appointment, conveying information to the physician, and providing an escort to assure that the physician's advice to the participant is followed at the conclusion of a visit.

The foregoing components have resulted in improved care transitions for PACE participants. Perhaps the most

impressive improvement has been in transitioning long-term NH residents back to the community. In early 2010, the Commonwealth of Pennsylvania established a long-term NH transition program wherein individuals who had been in the NH for more than 90 days were assisted back to the community.<sup>4</sup> This program has not only resulted in \$250 per day cost savings for the State, it also has improved the quality of life for these older adults who receive the support necessary to live in their own apartments.

### ACO Role in Improving Care Transitions

Clearly, ACO models similar to PACE can deliver improved care transitions. To promote ACOs, the correct financial incentives and resources to develop interdisciplinary care teams and technological support systems must be put in place. In addition, certain components of ACOs, such as the Medical Home, can be applied in the fee-for-service market to improve care transitions. Beyond the immediate benefit for participants, it is likely that ACOs will produce a Hawthorne-like effect in other health care delivery systems which, in turn, will improve transitions for non-ACO participants.

At this critical time when health care reform is focused on improving quality while reducing costs, ACOs can serve as the foundation for improving care transitions – a critical element in bettering outcomes.

### References

1. CMS/Office of Legislation. Medicare "Accountable Care Organizations" Shared Savings Program – New Section 1899 of Title XVIII. <https://www.cms.gov/OfficeofLegislation/Downloads/AccountableCareOrganization.pdf>. Accessed September 28, 2010.
2. Chatterji P, Burstein NR, Kidder D, White A. Evaluation of the Program of All-Inclusive Care for the Elderly (PACE) Demonstration. The impact of PACE on participant outcomes. <http://www.npaonline.org/website/download.asp?id=1933>. Accessed September 28, 2010.
3. National Pace Association. What is PACE? <http://www.npaonline.org/website/article.asp?id=12>. Accessed September 28, 2010.
4. American Association of Homes and Services for the Aging. Affordable Senior Housing with Services Programs and Models. Prepared for the National Summit on Affordable Senior Housing with Services; May 25, 2010; Washington, DC.